Hall-Effect Speed Sensor HA-P2

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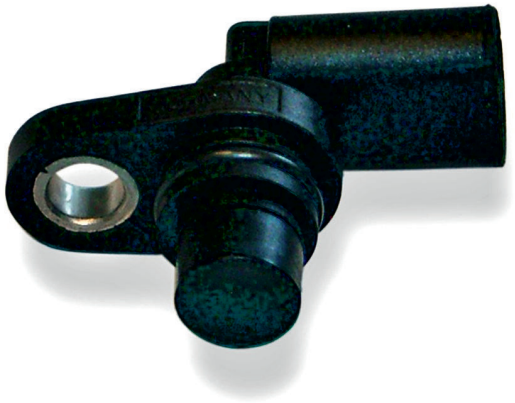


- Camshaft/crankshaft/wheel speed
- 15 mm depth
- Very small housing
- Very light weight
- Active low

This sensor is designed for incremental measurement of rotational speed (e.g. camshaft, crankshaft or wheelspeed).
Due to the rotation of a ferromagnetic target wheel in front of the HA-P2, the magnetic field is modulated at the place of the Hall probe. A Hall-effect sensor element with integrated signal conditioning circuit detects this change and generates a digital output signal. The main feature and benefit of this sensor is the combination of a high quality production part, robust design, very small housing and low weight.

Application

Application

Application	Speed
Max. frequency	≤10 kHz
Target wheel air gap	0.5 to 2.5 mm
Temperature range	-40 to 160°C
Output circuit	Open collector for 1 kOhm
Output type	Active low
External magnetic fields	< 0.1 mT
Max. vibration	400 m/s^2 at 10 Hz to 2 kHz

Technical Specifications

Mechanical Data

Weight w/o wire	12 g
Bore diameter	15 mm
Installation depth L2	15 mm
Mounting	With screw 1 x M6
Tightening torque	8 Nm

Electrical Data

Power supply US	4.75 to 18 V
Current Is	10 mA

Characteristic

Accuracy repeatability of the falling edge of tooth	
up to 1.5 mm up to 2.5 mm	< 4 % (≤ 10 kHz) < 8 % (≤ 10 kHz)
Signal output	0.4 V to < U_S

Connectors and Wires

Connector	Hirschmann 872-658-501 Cod.A
Mating connector	F 02U B00 520-01
Pin 1	U_S
Pin 2	Sig
Pin 3	Gnd

Environment

Target wheel diameter D	162.34 mm
Thickness t	12.5 mm
Width of teeth b1	3.8 mm
Width of gap b2	4.7 mm
Width of sync. gap b3	20.79 mm
Depth of teeth h1	3.4 mm
Number of teeth	60-2

Installation Notes

Application Notes

The HA-P2 can be connected directly to most control units and data logging systems.

Please avoid abrupt temperature changes.

For mounting please use only the integrated plug.

If a wheel with different dimensions is used (see Environment), the technical function has to be tested individually.

Please ensure that the environmental conditions do not exceed the sensor specifications.

Please find further application hints in the offer drawing at our homepage.

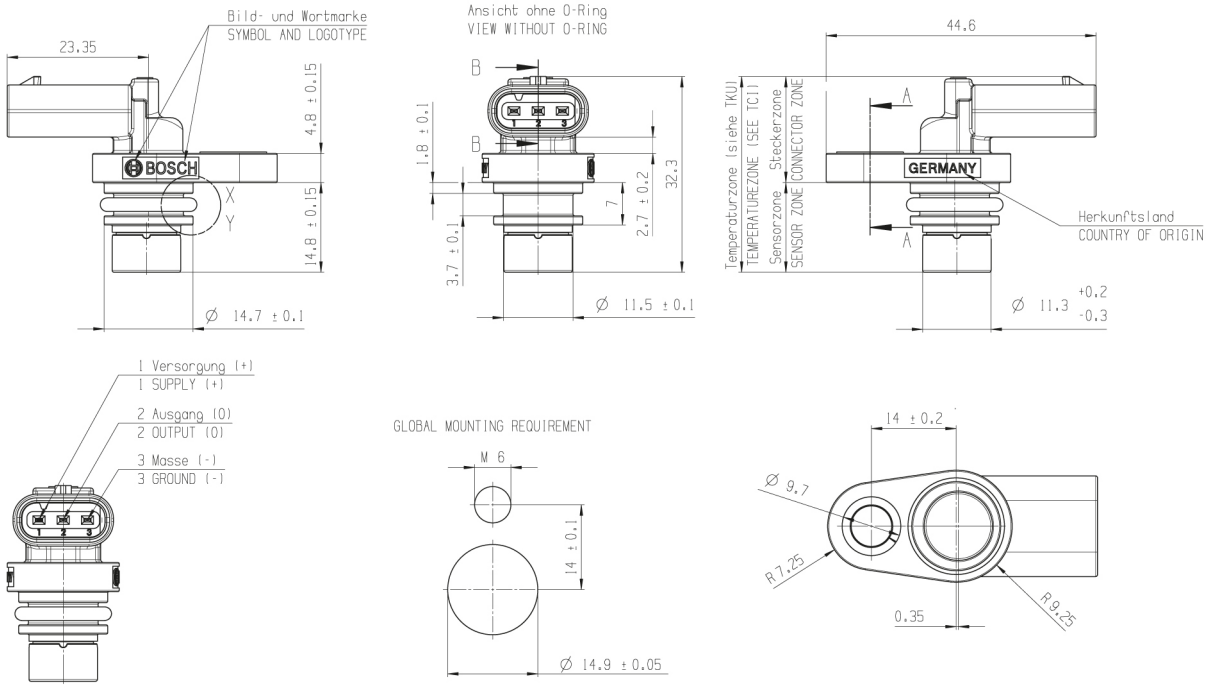
Safety Note

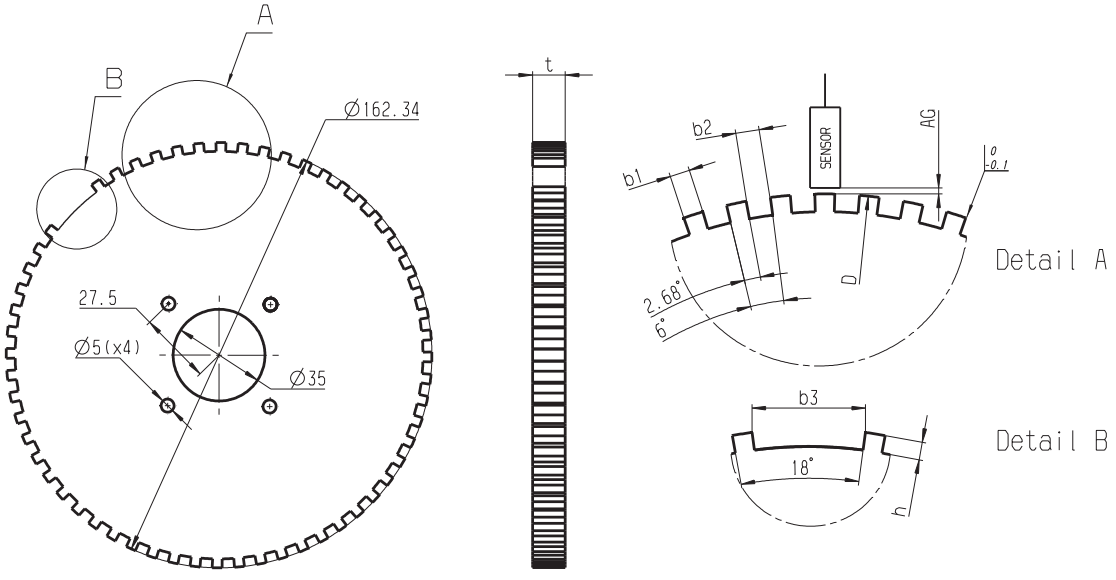
The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

Ordering Information

Hall-Effect Speed Sensor HA-P2
Order number **0 232 103 111**

Dimensions





60-2 Teeth

Left view

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